

Power Amplifiers, SBP Series



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FEATURES:

- ◆ Frequency coverage: 2 to 98 GHz
- ◆ High output power and P-1 dB
- ◆ High power added efficiency (PAE)
- ◆ Single positive DC power supply
- ◆ Standard temperature range: -10 to +60 °C

APPLICATIONS:

- ◆ Engineering prototypes
- ◆ Radar systems
- ◆ Communication systems
- ◆ Test instrumentations
- ◆ Power boosters

DESCRIPTION:

SBP series power amplifiers are designed and manufactured by utilizing the most advanced discrete PHEMT or MMIC devices and thin film technologies to cover the frequency range of 2 to 98 GHz. With improved DC power supply and advanced semiconductor technologies, these power amplifiers deliver not only high power output, but also superior power added efficiency (PAE) and higher linearity. The power amplifiers are divided into two categories, namely, catalog and custom designed. While catalog models focus on general purpose operation with broad operation bandwidth for general applications, custom designed models are optimized to meet customers' specific needs.

CATALOG MODELS:

Model Number	Frequency Range (GHz)	Gain (dB)	Gain Flatness (±dB)	P-1 dB (dBm)	VSWR (Typ)	Bias (V/mA)	Outlines
SBP-0230432530-SFSF-S1	2.0 to 4.0	25	1.5	30	2:1	+10.0/850	BG-C1, BG-N1, BG-W1
SBP-0230433530-SFSF-S1	2.0 to 4.0	35	2.0	30	2:1	+10.0/1,000	BG-C1, BG-N1, BG-W1
SBP-0430832530-SFSF-S1	4.0 to 8.0	25	1.5	30	2:1	+10.0/1,000	BG-C1, BG-N1, BG-W1
SBP-0430833530-SFSF-S1	4.0 to 8.0	35	2.0	30	2:1	+10.0/1,200	BG-C1, BG-N1, BG-W1
SBP-0631232530-SFSF-S1	6.0 to 12.0	25	1.5	30	2:1	+10.0/1,000	BG-C1, BG-N1, BG-W1
SBP-0631234030-SFSF-S1	6.0 to 12.0	40	2.0	30	2:1	+10.0/1,200	BG-C1, BG-N1, BG-W1
SBP-0831232530-SFSF-S1	8.0 to 12.4	25	1.5	30	2:1	+10.0/1,500	BG-C1, BG-N1, BG-W1
SBP-0831233530-SFSF-S1	8.0 to 12.4	35	2.0	30	2:1	+10.0/1,600	BG-C1, BG-N1, BG-W1
SBP-1231832530-SFSF-S1	12.0 to 18.0	25	2.0	30	2:1	+10.0/1,600	BG-C1, BG-N1, BG-W1
SBP-1231833530-SFSF-S1	12.0 to 18.0	35	2.5	30	2:1	+10.0/1,700	BG-C1, BG-N1, BG-W1
SBP-1832732528-KFKF-S1	18.0 to 26.5	25	2.0	28	2:1	+10.0/850	BG-C1, BG-N1, BG-W1
SBP-1832733530-KFKF-S1	18.0 to 26.5	35	2.5	30	2:1	+10.0/1,600	BG-C1, BG-N1, BG-W1
SBP-2731832528-KFKF-S1	27.0 to 32.0	25	2.0	28	2:1	+10.0/950	BG-C1, BG-N1, BG-W1
SBP-2733233530-KFKF-S1	27.0 to 32.0	35	2.5	30	2:1	+10.0/1,800	BG-C1, BG-N1, BG-W1
SBP-3333632530-KFKF-S1	33.0 to 36.0	25	2.0	30	2:1	+10.0/1,100	BG-C1, BG-N1, BG-W1
SBP-3333633530-KFKF-S1	33.0 to 36.0	35	2.3	30	2:1	+10.0/1,200	BG-C1, BG-N1, BG-W1
SBP-3333634530-KFKF-S1	33.0 to 36.0	45	2.5	30	2:1	+10.0/1,300	BG-C1, BG-N1, BG-W1

Model Number	Frequency Range (GHz)	Gain (dB)	Gain Flatness (±dB)	P-1 dB (dBm)	VSWR (Typ)	Bias (V/mA)	Outlines
SBP-3333632528-KFKF-S1	36.0 to 40.0	25	2.0	28	2:1	+10.0/1,100	BG-C1, BG-N1, BG-W1
SBP-3333633530-KFKF-S1	36.0 to 40.0	35	2.5	30	2:1	+10.0/2,400	BG-C1, BG-N1, BG-W1
SBP-4034532528-2F2F-S1	40.0 to 45.0	25	2.0	28	2:1	+10.0/1,100	BG-C2, BG-N2, BG-W2
SBP-4034533530-2F2F-S1	40.0 to 45.0	35	2.5	30	2:1	+10.0/2,400	BG-C2, BG-N2, BG-W2
SBP-5035532516-1515-S1	50.0 to 55.0	25	1.0	16	2:1	+10.0/250	BG-C2, BG-N2, BG-W2
SBP-5035533516-1515-S1	50.0 to 55.0	35	1.5	16	2:1	+10.0/300	BG-C2, BG-N2, BG-W2
SBP-5536032516-1515-S1	55.0 to 60.0	25	1.0	16	2:1	+10.0/250	BG-C2, BG-N2, BG-W2
SBP-5536033516-1515-S1	55.0 to 60.0	35	1.5	16	2:1	+10.0/300	BG-C2, BG-N2, BG-W2
SBP-6036532516-1515-S1	60.0 to 65.0	25	1.0	16	2:1	+10.0/250	BG-C2, BG-N2, BG-W2
SBP-6036533516-1515-S1	60.0 to 65.0	35	1.5	16	2:1	+10.0/300	BG-C2, BG-N2, BG-W2
SBP-6537032515-1515-S1	65.0 to 70.0	25	1.0	15	2:1	+10.0/250	BG-C2, BG-N2, BG-W2
SBP-6537033515-1515-S1	65.0 to 70.0	35	1.5	15	2:1	+10.0/300	BG-C2, BG-N2, BG-W2
SBP-7137632018-1212-S1	71.0 to 76.0	20	2.0	18	3:1	+10.0/350	BG-C2, BG-N2, BG-W2
SBP-7137633518-1212-S1	71.0 to 76.0	35	3.0	18	3:1	+10.0/450	BG-C2, BG-N2, BG-W2
SBP-7137633520-1212-S1	71.0 to 76.0	35	3.0	20	3:1	+10.0/650	BG-C2, BG-N2, BG-W2
SBP-8138632018-1212-S1	81.0 to 86.0	20	2.0	18	3:1	+10.0/350	BG-C2, BG-N2, BG-W2
SBP-8138633518-1212-S1	81.0 to 86.0	35	3.0	18	3:1	+10.0/450	BG-C2, BG-N2, BG-W2
SBP-8138633520-1212-S1	81.0 to 86.0	35	3.0	20	3:1	+10.0/650	BG-C2, BG-N2, BG-W2
SBP-8539032018-1010-S1	85.0 to 90.0	20	2.0	18	3:1	+10.0/350	BG-C2, BG-N2, BG-W2
SBP-8539033518-1010-S1	85.0 to 90.0	35	3.0	18	3:1	+10.0/450	BG-C2, BG-N2, BG-W2
SBP-8539033520-1010-S1	85.0 to 90.0	35	3.0	20	3:1	+10.0/650	BG-C2, BG-N2, BG-W2
SBP-9039532520-1010-S1	90.0 to 95.0	25	2.0	20	3:1	+10.0/550	BG-C2, BG-N2, BG-W2
SBP-9039532522-1010-S1	92.0 to 95.0	25	2.0	22	3:1	+10.0/1,000	BG-C2, BG-N2, BG-W2
SBP-9039532524-1010-S1	92.0 to 95.0	25	2.0	24	3:1	+10.0/2,000	BG-C2, BG-N2, BG-W2
SBP-9539832515-1010-S1	95.0 to 98.0	25	2.0	15	3:1	+10.0/350	BG-C2, BG-N2, BG-W2
SBP-9539833518-1010-S1	95.0 to 98.0	35	2.0	18	3:1	+10.0/550	BG-C2, BG-N2, BG-W2

CUSTOM DESIGNED MODELS:

Sage Millimeter's power amplifiers' model numbers are configured per following format. Customers may refer to the format and specify their own model numbers accordingly when placing the order. There are various housing styles for amplifiers. Contact factory for details.

SBP - F1N F2N GG PP - CI CO - XY

F1N is the start frequency in MHz x 10N. For example: 60 GHz = 603

F2N is the stop frequency in MHz x 10N. For example: 65 GHz = 653

GG is the linear gain in dB. For example: 25 dB = 25

PP is the output P-1 dB in dBm. For example: 20 dBm = 20

CI is the input connector type. For example: V(F) = VF

CO is the output connector type. For example: WR-15 = 15

X is for antenna type. "S" is for standard and "C" is for custom designed.

Y is for factory reserve.

Example: SBP-6036532520-VF15-XY is a custom designed power amplifier with frequency range of 60 to 65 GHz, linear gain 25 dB and P-1 dB 20 dBm. The input connector is V(F) and output RF connector is WR-15 waveguides. "1" is a factory assigned sequential number.